U.S. Department of Energy
Office of River Protection
P.O. Box 450
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0059024

MAR 2 6 2003

03-TPD-027

Mr. Michael A. Wilson, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
1315 W. Fourth Avenue
Kennewick, Washington 99336

Dear Mr. Wilson:

INTERIM STABILIZATION (IS) OF TANK 241-C-103

On February 9, 2003 pumping in tank 241-C-103 was automatically stopped when a valve in the valve pit leaked. The valve is not easily accessible and is in a contaminated area with a high radiation level. Because pumping in the tank is very near to the end of the IS process, an evaluation was made to determine if it meets the criteria for completion due to equipment failure as specified in the Single-Shell Tank Interim Stabilization Consent Decree No. CT-99-5076-EFS.

For IS, the Consent Decree criteria are: (a) less than 50,000 gallons of drainable interstitial liquid, (b) less than 5,000 gallons of supernatant liquid, and (c) if jet pumping is used, the pump flow must be at 0.05 gallons per minute or less before pumping is discontinued. If a major equipment failure occurs at a tank that meets criteria (a) and (b), then the U.S. Department of Energy, Office of River Protection may, after consulting with Washington State Department of Ecology (Ecology), consider the tank interim stabilized.

Some specific information for tank 241-C-103 follows. More than 113,000 gallons of liquid waste have been removed. The total estimated volume of liquid remaining in the tank is less than 10,000 gallons, considerably below the 50,000 gallons of criterion (a) above. This value is determined by measurement of the liquid level inside the saltscreen. Supernatant liquid is determined by estimation of the volume of liquid in small pools seen in videos of the surface of the tank. That estimate is less than 1,000 gallons and is also well below the 5,000 gallons of criterion (b) above. The pumping rate during the last week of pumping was 0.14 gallons per minute. Although, this is above the criterion (c) rate, it is consistent with the later stages of pumping and indicates that little pumpable volume remains.

This is considered a major equipment failure because criteria (a) and (b) were met and the repair cost and estimated personnel exposure to radiation while doing the repair work are significant. The cost was estimated to be more than $100,000. The total exposure is estimated to be more than 500 millirem to make the repair in the contaminated pit. The risk presented by the radiation exposure would be greater than the risk represented by the pumpable liquid remaining in the

tank. A briefing and discussion was held with Nancy Uziemblo of Ecology on March 20, 2003 to discuss the criteria for major equipment failure for tank 241-C-103 and it was agreed that the criteria has been met.

If you have any questions, please contact me, or your staff may contact Andrew J. Stevens, Tank Farms Programs and Projects Division, (509) 376-8235.

Sincerely,

James E. Rasmussen, Director
Environmental Division

TPD:AJS

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